UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,869	02/08/2001	Steven M. Horowitz	14531.79	6689

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WORKMAN NYDEGGER/MICROSOFT
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UT 84111

EXAMINER
SHANNON, MICHAEL R

ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/779,869	HOROWITZ ET AL.
	Examiner	Art Unit	
	Michael R. Shannon	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 July 2005</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,10,12-15,17 and 19-21* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,10,12-15,17 and 19-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to independent claims 1, 10, and 17 have

been considered but are moot in view of the new ground(s) of rejection.

The Examiner would also like to address some of the arguments presented on

page 15 of the remarks filed July 1, 2005. The Applicant states:

> Unlike applicants' claimed method and system, Barton does not then directly store
> selected channels from the input stream in the same digital format as they were
> prepared by the digital content provider. Rather, as expressly taught by Barton, "the
> input section 101 produces MPEG streams. An MPEG2 transport multiplex supports
> multiple programs in the same broadcast channel, with multiple video and audio feeds
> and private data. The input section 101 (see figure 1) tunes the channel to a particular
> program, extracts the specific MPEG program out of it and feeds it to the rest of the
> system. ...**Such signals** are decoded by the input section and passed to other sections
> as if they were delivered via an MPEG2 private data channel.' Column 3, lines 43-62.

The Examiner would like to note that the Applicant has misrepresented the text of the

Barton reference. The "Such signals" that the applicant refers to as being decoded (see

bold text above) refer to the Closed Caption (CC) and Extended Data Services (EDS)

signals that are sent in the VBI of some analog video signals. As column 3, lines 49-61

specifically point out, "The analog TV signals are encoded into a similar MPEG format

using separate video and audio encoders, such that the remainder of the system is

unaware of how the signal was obtained. Information may be modulated into the

Vertical Blanking Interval (VBI) of the analog TV signal in a number of standard

ways...such signals [the CC or EDS VBI signals] are decoded by the input section and

passed to the other sections as if they were delivered via an MPEG2 private data

channel". Therefore, the insinuation that the MPEG signals are decoded (as is suggested by the Applicant) is simply false. As the Barton reference states and the Applicant quotes "The input section 101 (see figure 1) tunes the channel to a particular program, extracts [demultiplexes] the specific MPEG program out of it and feeds it to the rest of the system". Nowhere in this process is a received MPEG signal decoded before being sent to the hard disk for storage. Furthermore, Figure 7 specifically shows that the MPEG decoder 715 is only present at the output of the system just before TV 716. Contrary to the Applicants suggestion, the Barton reference DOES directly store selected channels from the input stream in the same digital format as they were prepared by the digital content provider (in this case, MPEG streams). The Examiner does note the footnotes in the Applicants' remarks, however, also notes that the Applicant was misleading in representing the "such signals" as the MPEG signals, when, after a thorough detailed examination of the Barton reference, any person skilled in the art would realize that the "such signals" are clearly CC and EDS signals delivered via analog VBI and subsequently decoded.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1, 10, 12-15, 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Barton (USP 6,233,389), previously cited by Examiner, in view of

Weaver (USP 6,112,226), cited by Examiner.

Regarding claim 1, the claimed features of the method are met as follows:

- The claimed "set top box receiving digital programming content comprised

  of multiple channels" is met by Barton, column 3, lines 30-49, which

  disclose receiving television input streams in a multitude of forms, such as

  MPEG2 digital forms.

- The claim that the "programming content of each channel is provided to

  the set top box in an encoded digital format determined by the provider of

  the content" is met by the fact that the content is delivered in a MPEG

  format, which is sent as an MPEG format from the provider [col. 3, lines

  39-43].

- The claimed "method for recording one or more selected channels without

  decoding them prior to recording so as to store them in the same encoded

  digital format as determined by the content provider in order not to

  degrade the recording quality of the selected channels" is met by the

  ability, as noted by the Applicant in footnote number 4 (filed July 1, 2005)

  and in the Barton reference, to use MPEG2 streams as they are received

  and not decoded prior to being stored. The above arguments specifically

  point out that Figure 7 specifically shows that the MPEG decoder 715 is

  only present at the output of the system just before TV 716. The Barton

reference does therefore directly store selected channels from the input

stream in the same digital format as they were prepared by the digital

content provider (in this case, MPEG streams) so that they are not

degraded prior to storage.

- The claimed ability to "permit display of one of the recorded channels

  while recording another one of the selected channels" is met by the Media

  Switch recording one program while the user is watching another from the

  disk [col. 4, lines 19-22].

- The claimed step of "receiving at the set top box digital programming

  content which is comprised of any or any combination of satellite

  transmissions, cable television transmissions, local television

  transmissions, radio transmissions, Internet data, MPEG video or audio,

  video streams, or audio streams, and wherein the digital programming

  content is encoded in a digital format that is determined by a content

  provider and wherein the digital format of at least one channel is other

  than MPEG" is met partially by the Barton reference, which does receive a

  multitude of input streams at the receiver, from DBS, DSS, NTSC, ATSC,

  and MPEG2 streams [col. 3, lines 30-39]. However, as noted by the

  Applicant and agreed upon by the Examiner, the Barton reference does

  convert everything into MPEG2 for processing within the system (except

  of course, in the case of receiving MPEG2, because no processing needs

  to be done in order to get an MPEG2 stream into an MPEG2 stream).

Since the Barton reference does not teach that the digital format of at least

one channel is other than MPEG, a secondary reference teaching a video

encoding scheme other than MPEG is needed. Therefore, the Examiner

relies upon the Weaver reference, which states that "structures analogous

to those described above for MPEG-2 transport streams also exist in other

digital audio-video storage formats, including MPEG-1, QuickTime, AVI,

Proshare and H.261 formats. ...Multiple digital audio-visual storage

formats can be accessed by the same server to simultaneously serve

different clients from a wide variety of storage formats" [col. 7, lines 59-

67]. In other words, other types of file formats (for example QuickTime or

AVI) could easily be substituted for the MPEG file formats and result in the

same outcome. It is simply a matter of choosing the file format that best

fits the client to conform to a wide variety of storage formats. The

Examiner submits that it would have been clearly obvious to use AVI,

QuickTime, Proshare, or H.261 file formats instead of MPEG, in order to

enable the client system to work with whatever kind of file formats the

server sends according to receiver capabilities. Furthermore, a well-

known benefit of QuickTime file format is it ability to "fast-start", allowing it

to download progressively and allow the viewer to begin watching a video

file before the file has finished downloading. The suggestion for modifying

the Barton reference with the AVI or QuickTime file formats is simply a

matter of choosing the file format that best fits the needs of the system.

All file formats, as noted by the Weaver reference are analogous, and

therefore, interchangeable. Therefore, the fact that the digital format of at

least one channel is other than MPEG is simply a matter of choosing AVI

or QuickTime file formats instead of MPEG, which, as outlined by Weaver,

is a common practice in the art.

- The claimed step of "isolating and thereby selecting the at least one

  channel from the programming content with a tuner, demodulator, and

  transport demultiplexer of the set top box receiver" is met by the Input

  Section 101, which tunes and extracts the signal getting the television

  program signal ready for use within the rest of the system (in the Barton

  reference, this is discussed with reference to an MPEG signal, but, as is

  discussed above and in Weaver, AVI or QuickTime signals could easily be

  substituted) [col. 3, lines 46-49].

- The claimed step of "storing the digital content of the at least one channel

  on a storage medium without decoding it so as to store it using the same

  digital format with which the at least one channel was received at the set

  top box in order to store the digital content of the at least one channel

  without degrading it" is met by the ability, as noted by the Applicant in

  footnote number 4 (filed July 1, 2005) and in the Barton reference, to use

  MPEG2 streams (or AVI or QuickTime signals as discussed in Weaver) as

  they are received and not decoded prior to being stored. The above

  arguments specifically point out that Figure 7 specifically shows that the

MPEG decoder 715 is only present at the output of the system just before TV 716. The Barton reference does therefore directly store selected channels from the input stream in the same digital format as they were prepared by the digital content provider (in this case, MPEG, AVI, or QuickTime streams) so that they are not degraded prior to storage.

- The claimed step of "retrieving digital content of a second channel from the storage medium that has previously been stored prior to decoding" is met by the Media Switch recording one program while the user is watching another from the disk [col. 4, lines 19-22].

- The claimed step of "decoding the digital content of the second channel into an analog format for display at a display device while storing the digital content of the at least one channel on the storage medium" is met by the decoder 715 of Figure 7, which takes a file from the hard disk and decodes it just prior to output on TV 716. At the same time, another digital channel (be it MPEG, AVI, or QuickTime) can be stored on the storage medium [col. 4, lines 19-22].

- The claimed step of "displaying the decoded analog format of the content of the second channel on the display device" is met by the user watching the stream that is extracted off the disk on television 716.

Regarding claims 10 and 17, they are rejected similarly to claim 1 above.

Regarding claim 12, the claimed "method as defined in claim 10, wherein the at

least one channel is compressed" is met by the fact that MPEG, AVI, and QuickTime

are all well known digitally compressed video formats.

Regarding claim 13, the claimed "method as defined in claim 10, wherein the act

of recording the at least one channel further comprises the act of simultaneously

displaying the at least one channel on a display device" is met by the MPEG stream (or

in the case of Weaver, the AVI or QuickTime stream) being sent to the output section

for display and written simultaneously to the hard disk or storage device 105 [col. 3, line

66 – col. 4, line 2].

Regarding claim 14, the claimed "method as defined in claim 13, wherein the act

of displaying the at least one channel further comprises the act of decoding the at least

one channel with a decoder, wherein the decoder produces video output and audio

outputs" is met by the output module which contains MPEG decoder 715 and audio

decoder 717, used for outputting decoded video to the TV 716.

Regarding claim 15, the claimed "method as defined in claim 10, further

comprising the steps of: decoding a second channel already recorded on the storage

medium while the at least one channel is recording on the storage medium; and

displaying the second channel" are met by the ability for the system to extract a

previously recorded program from the disk and send it to the MPEG decoder 715 [col. 7,

lines 5-7] without the need for the tuner, since the tuner is being used to record a

current program [col. 4, lines 19-22].

Regarding claim 19, see the above rejection of claim 15.

Regarding claim 20, see the above rejection of claim 13.

4.   Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barton

et al (USPN 6,233,389), previously cited by examiner, in view of Weaver (USP

6,112,226), cited by Examiner, and in further view of Elliott (USPN 6,442,328),

previously cited by examiner.

Regarding claim 21, the Barton and Weaver references discloses all of that

which is discussed above with regards to claim 17. Neither the Barton nor the Weaver

references expressly disclose a "conditional access system for determining whether a

selected channel may be displayed". Elliott discloses a conditional access module114

[Fig. 2] for use in determining whether the device may display the selected channel. At

the time of the invention it would have been obvious to one of ordinary skill in the art to

utilize the conditional access module taught by Elliott, in order to deny/allow use of

certain special and pre-authorized channels by the user.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

6.   Claim 1 is rejected under 35 U.S.C. 112, first paragraph, because the

specification, while being enabling for "any or any combination of satellite... and

wherein the digital programming content is encoded in a digital format that is

determined by a content provider and wherein the digital format of at least one channel

is other than MPEG", does not reasonably provide enablement for the "MPEG video or

audio" type of digital programming content. The specification does not enable any

person skilled in the art to which it pertains, or with which it is most nearly connected, to

use the invention commensurate in scope with these claims. Since the digital

programming content can comprise ANY or ANY COMBINATION OF satellite

transmissions, cable television transmissions, local television transmissions, radio

transmissions, Internet data, MPEG video or audio, video streams, or audio streams,

each one of the sources of content must be usable alone in the claim. However, since

the statement, "the digital programming content can comprise ... MPEG video or audio

... wherein the digital format of at least one channel is other than MPEG" leaves the

scope of the claim not enabled for this scenario set up by the use of the word ANY, the

whole claim is not enabled.

Conclusion

7.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael R. Shannon who can be reached at (571) 272-

7356 or Michael.Shannon@uspto.gov. The examiner can normally be reached by

phone Monday through Friday 8:00 AM – 5:00PM, with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Miller, can be reached at (571) 272-7353.

Any response to this action should be mailed to:

Please address mail to be delivered by the United States Postal Service (USPS)
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> Mail Stop _____
> Commissioner for Patents
> P.O. Box 1450
> Alexandria, VA 22313-1450

Effective January 14, 2005, except correspondence for Maintenance Fee

payments, Deposit Account Replenishments (see 1.25(c)(4)), and Licensing and

Review (see 37 CFR 5.1(c) and 5.2(c)), please address correspondence to be

delivered by other delivery services (Federal Express (Fed Ex), UPS, DHL,

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Or faxed to: (571) 273-8300

Hand-delivered responses should be brought to:

Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to customer service whose telephone number is **(571)**

272-2600.

Michael R Shannon
Examiner
Art Unit 2614

Michael R Shannon
September 13, 2005

BRIAN YENKE
PRIMARY EXAMINER